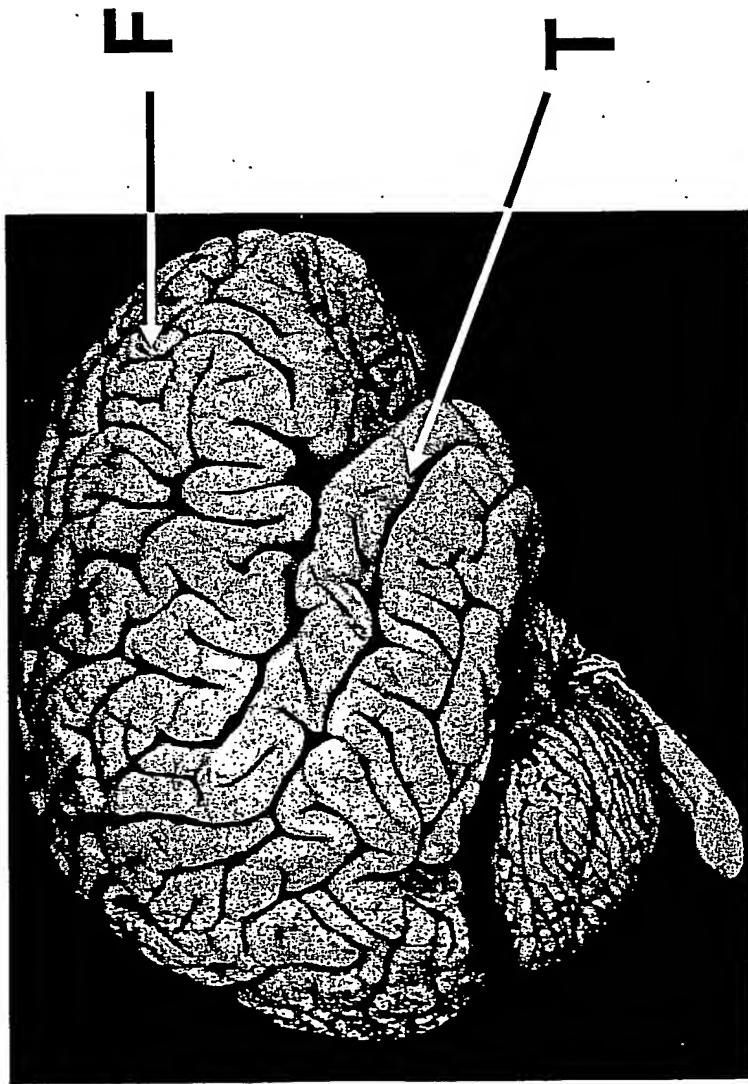


Fig. 1: Identification of Genes Involved
in Alzheimer's Disease Pathology



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Fig. 2: Identification of differentially expressed genes in a suppressive subtractive hybridization screen by dot blot analysis

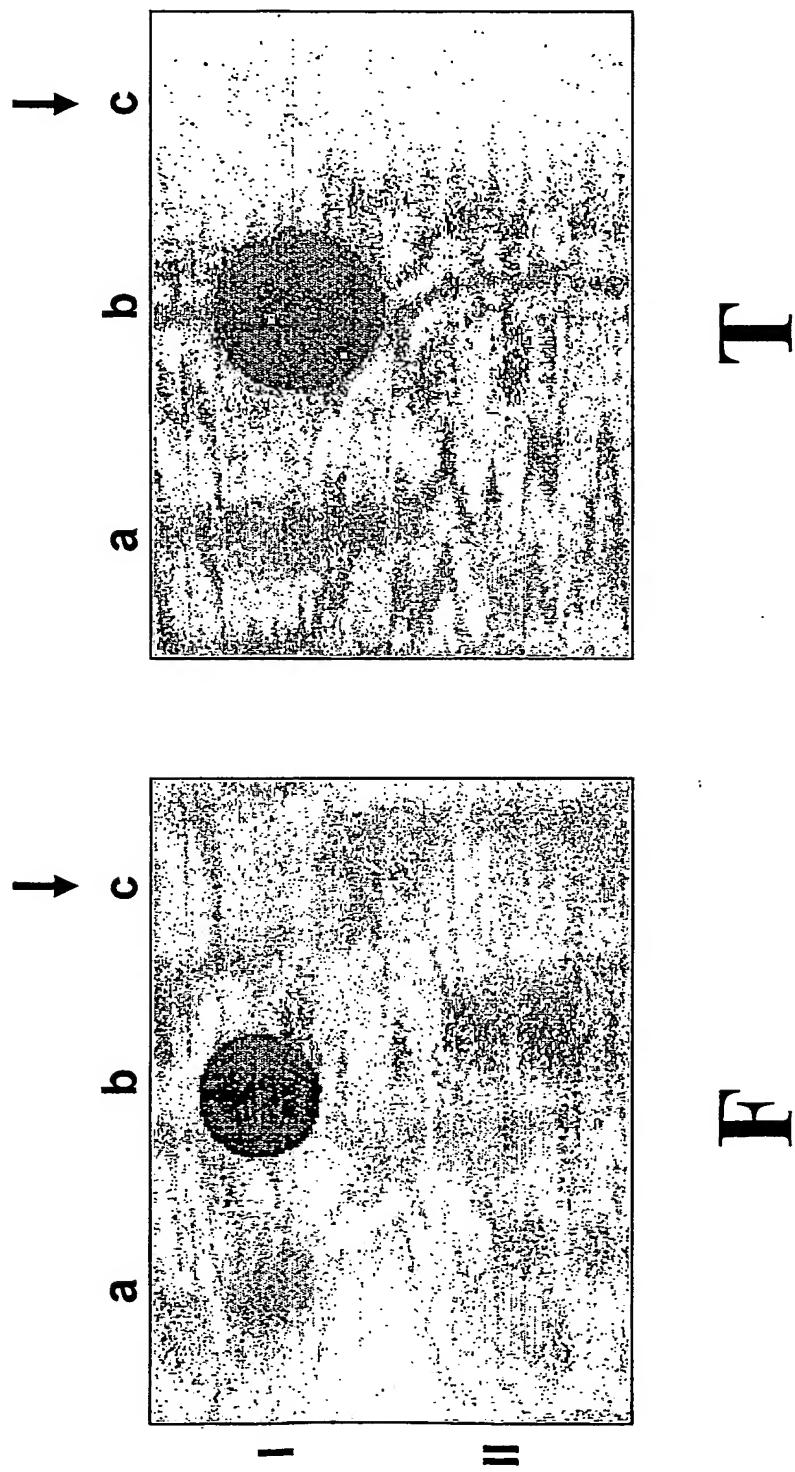


Fig. 3: Verification of differential expression of SCN2A by quantitative RT-PCR

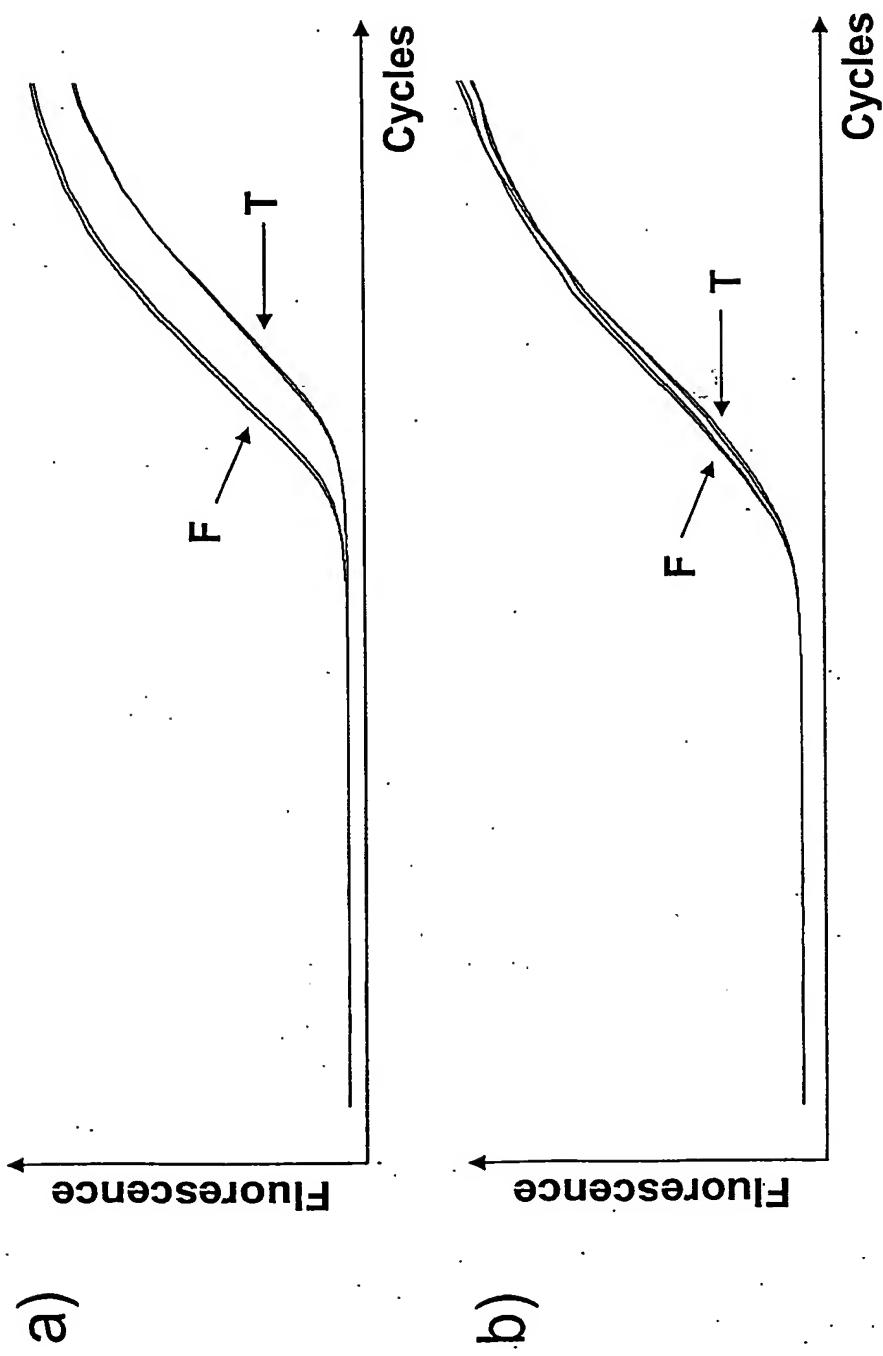
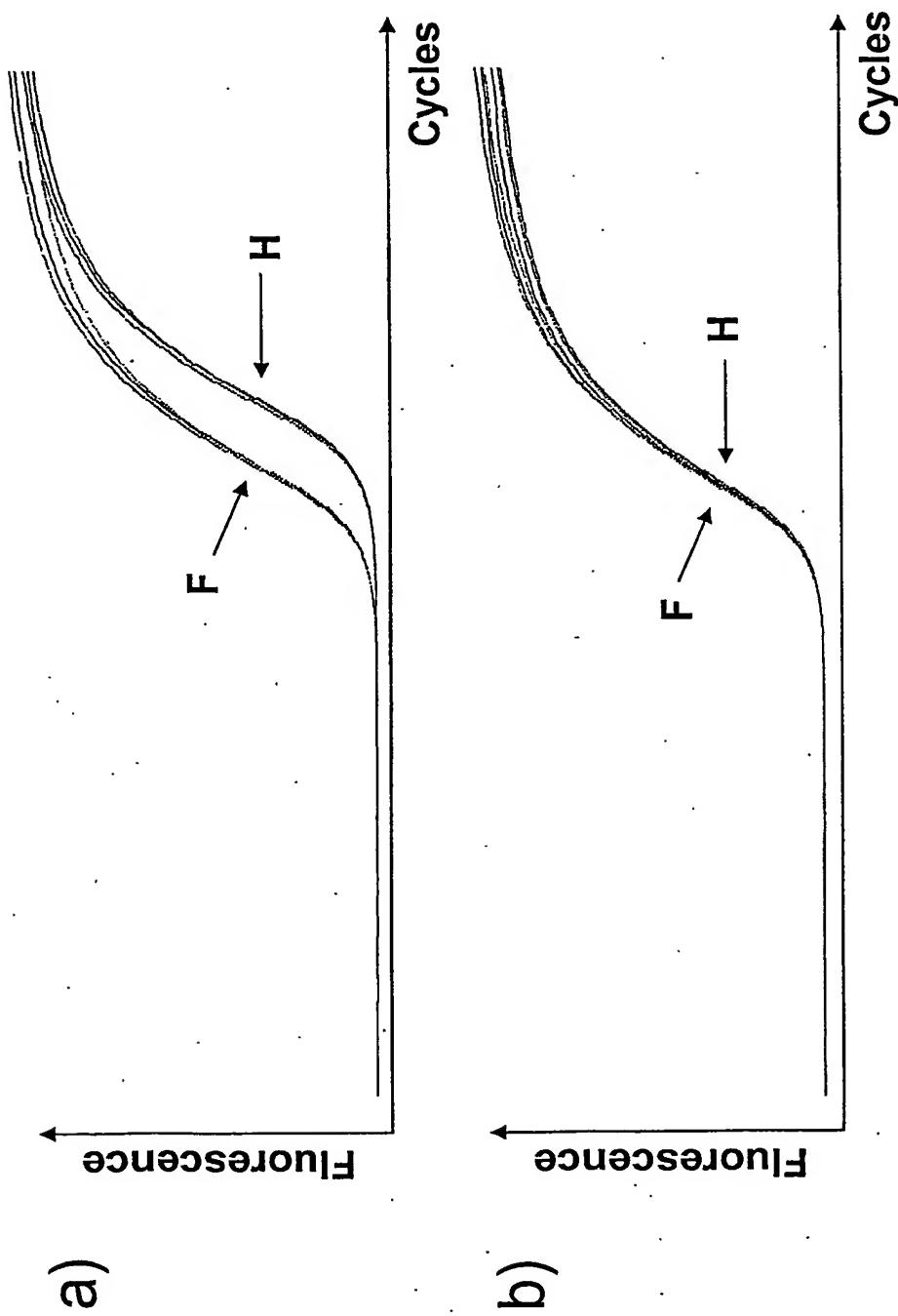


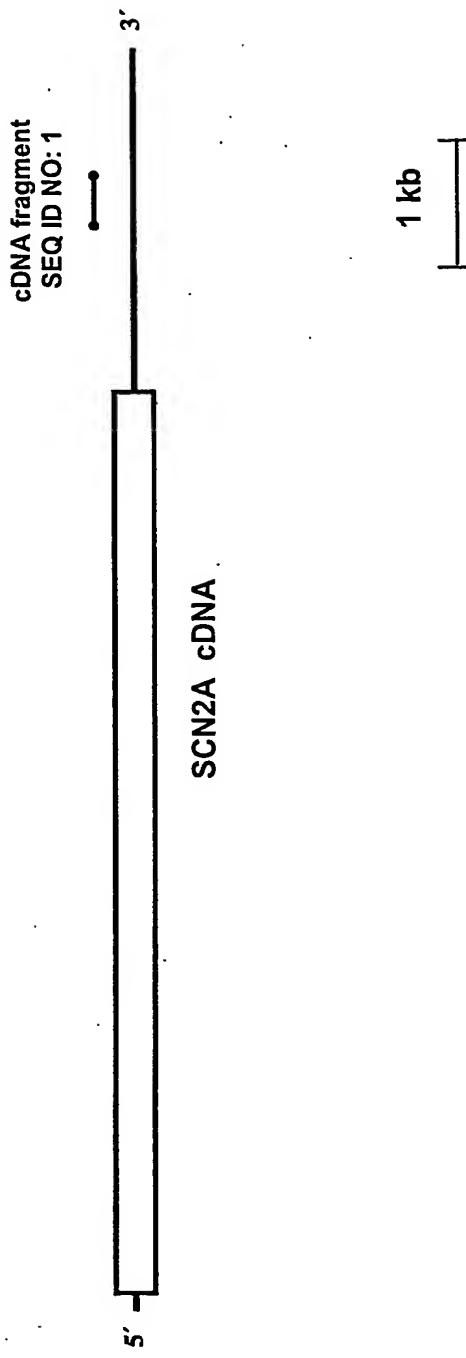
Fig. 4: Verification of differential expression of SCN2A by quantitative RT-PCR



**Fig. 5: Nucleotide sequence
of SEQ ID NO: 1****Length: 272 bp**

1 AATTAAGGTT GGAAGAATAA AAAGCAAGAA GCTTTCCCTT GTTGCTGCA
51 ACCTATTGCT TAATGACATG AAGAATGAGG TCTTGGTAGA ACAATTTGCT
101 TCACCTTACC ACTGATATAT GGCTTCCCCTT ATTAGACTTC TGAACAGGGG
151 AAGGAATAAG ATACAGCAGC ATAGGCAAGA TAAACATGCA GCAGTGACAG
201 CTTCAAACTA TAATGGAACC AATTACATCA TATTACCTGT TGGAAGCTTG
251 CAAACTATAAC TTACTGGGGT AC

Fig. 6: Schematic alignment of SEQ ID NO: 1 with sodium channel type II alpha subunit (Accession No. AF327224 - AF327246)



**Fig. 7: Alignment of SEQ ID NO: 1
to voltage-gated ion channel type II A cDNA, SEQ ID
NO: 2**

Length: 272 bp

272	GTACCCAGTAAGTATAGTTGCAAGCTTCAACAGGTAAATATGATGTAA	223
7248	GTACCACAGTAAGTATAGTTGCAAGCTTCAACAGGTAAATATGATGTAA	7297
222	TTGGTTCCATTATAGTTGAAGCTGTCAGTGCTGCATGTTATCTTGCCT	173
7298	TTGGTTCCATTATAGTTGAAGCTGTCAGTGCTGCATGTTATCTTGCCT	7347
172	ATGCTGCTGTATCTTATTCTTCCCTGTTCAAGAAGTCTAATATGGGAAG	123
7348	ATGCTGCTGTATCTTATTCTTCCACTGTTCAAGAAGTCTAATATGGGAAG	7397
122	CCATATATCAGTGGTAAAGTGAAGCAAATTGTTCTACCAAGACCTCATTC	73
7398	CCATATATCAGTGGTAAAGTGAAGCAAATTGTTCTACCAAGACCTCATTC	7447
72	TTCATGTCAATTAGCAATAGGTTGCAGCAAACAAGGAAGAGCTTCTTGCT	23
7448	TTCATGTCAATTAGCAATAGGTTGCAGCAAACAAGGAAGAGCTTCTTGCT	7497
22	TTTTATTCTTCAACCTTAATT	1
7498	TTTTATTCTTCAACCTTAATT	7519

Fig. 8: SEQ ID NO. 2: nucleotide sequence of human SCN2A cDNA

Length: 8292 bp

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1  CACTTTCTTA TGCAAGGAGC TAAACAGTGA TTAAAGGAGC AGGATGAAAA
51  GATGGCACAG TCAGTGCTGG TACCGCCAGG ACCTGACAGC TTCCGTTCT
101 TTACCAGGGA ATCCCTTGCT GCTATTGAAC AACGCATTGC AGAAGAGAAA
151 GCTAAGAGAC CCAAACAGGA ACGCAAGGAT GAGGATGATG AAAATGGCCC
201 AAAGCCAAAC AGTGACTTGG AAGCAGGAAA ATCTCTTCCA TTTATTTATG
251 GAGACATTCC TCCAGAGATG GTGTCACTGC CCCTGGAGGA TCTGGACCCC
301 TACTATATCA ATAAGAAAAC GTTTATAGTA TTGAATAAAG GGAAAGCAAT
351 CTCTCGATTTC AGTGCCACCC CTGCCCTTA CATTTTAACT CCCTTCAACC
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451 CTCATTATGT GCACGATTCT TACCAACTGT GTATTATGA CCATGAGTAA
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651 TTTGCAATAT GTGACAGAGT TTGTGGACCT GGGCAATGTC TCAGCGTTGA
701 GAACATTCAAG AGTTCTCCGA GCATTGAAAA CAATTTCAGT CATTCCAGGC
751 CTGAAGACCA TTGTGGGGGC CCTGATCCAG TCAGTGAAGA AGCTTCTGA
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851 TGCAGTTGTT CATGGGCAAC CTACGAAATA AATGTTGCA ATGGCCTCCA
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1251 GTACATGATA TTTTTGTGC TGGTCACTTT CTTGGGCTCA TTCTATCTAA
1301 TAAATTGAT CTTGGCTGTG GTGGCCATGG CCTATGAGGA ACAGAATCAG
1351 GCCACATTGG AAGAGGCTGA ACAGAAGGAA GCTGAATTTC AGCAGATGCT
1401 CGAACAGTTG AAAAAGCAAC AAGAAGAAGC TCAGGCGGCA GCTGCAGCCG
1451 CATCTGCTGA ATCAAGAGAC TTCAGTGGTG CTGGTGGGAT AGGAGTTTT
1501 TCAGAGAGTT CTTCACTGAGC ATCTAAGTTG AGCTCCAAA GTGAAAAGA
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1801 GCAAAGGACA TTGGCTCTGA GAATGACTTT GCTGATGATG AGCACAGCAC
1851 CTTTGAGGAC AATGACAGCC GAAGAGACTC TCTGTTGCTG CCGCACAGAC
1901 ATGGAGAACG GCGCCACAGC AATGTCAGCC AGGCCAGCCG TGCCTCCAGG
1951 GTGCTCCCCA TCCTGCCAT GAATGGGAAG ATGCATAGCG CTGTGGACTG
2001 CAATGGTGTG GTCTCCCTGG TCGGGGGCC CTTCTACCTC ACATCTGCTG
2051 GGCAGCTCCT ACCAGAGGGC ACAACTACTG AAACAGAAAAT AAGAAAGAGA
2101 CGGTCCAGTT CTTATCATGT TTCCATGGAT TTATTGGAAG ATCCTACATC
2151 AAGGCAAAGA GCAATGAGTA TAGCCAGTAT TTTGACCAAC ACCATGGAAG
2201 AACTTGAAGA ATCCAGACAG AAATGCCAC CATGCTGGTA TAAATTGCT
2251 AATATGTGTT TGATTGGGA CTGTTGAAA CCATGGTTAA AGGTGAAACA

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2301 CCTTGTCAAC CTGGTTGTAA TGGACCCATT TGTTGACCTG GCCATCACCA
 2351 TCTGCATTGT CTTAAATACA CTCTTCATGG CTATGGAGCA CTATCCCAGG
 2401 ACGGAGCAGT TCAGCAGTGT ACTGTCCTGTT GGAAACCTGG TCTTCACAGG
 2451 GATCTTCACA GCAGAAATGT TTCTCAAGAT AATTGCCATG GATCCATATT
 2501 ATTACTTCA AGAAGGCTGG AATATTTTG ATGGTTTAT TGTGAGCCTT
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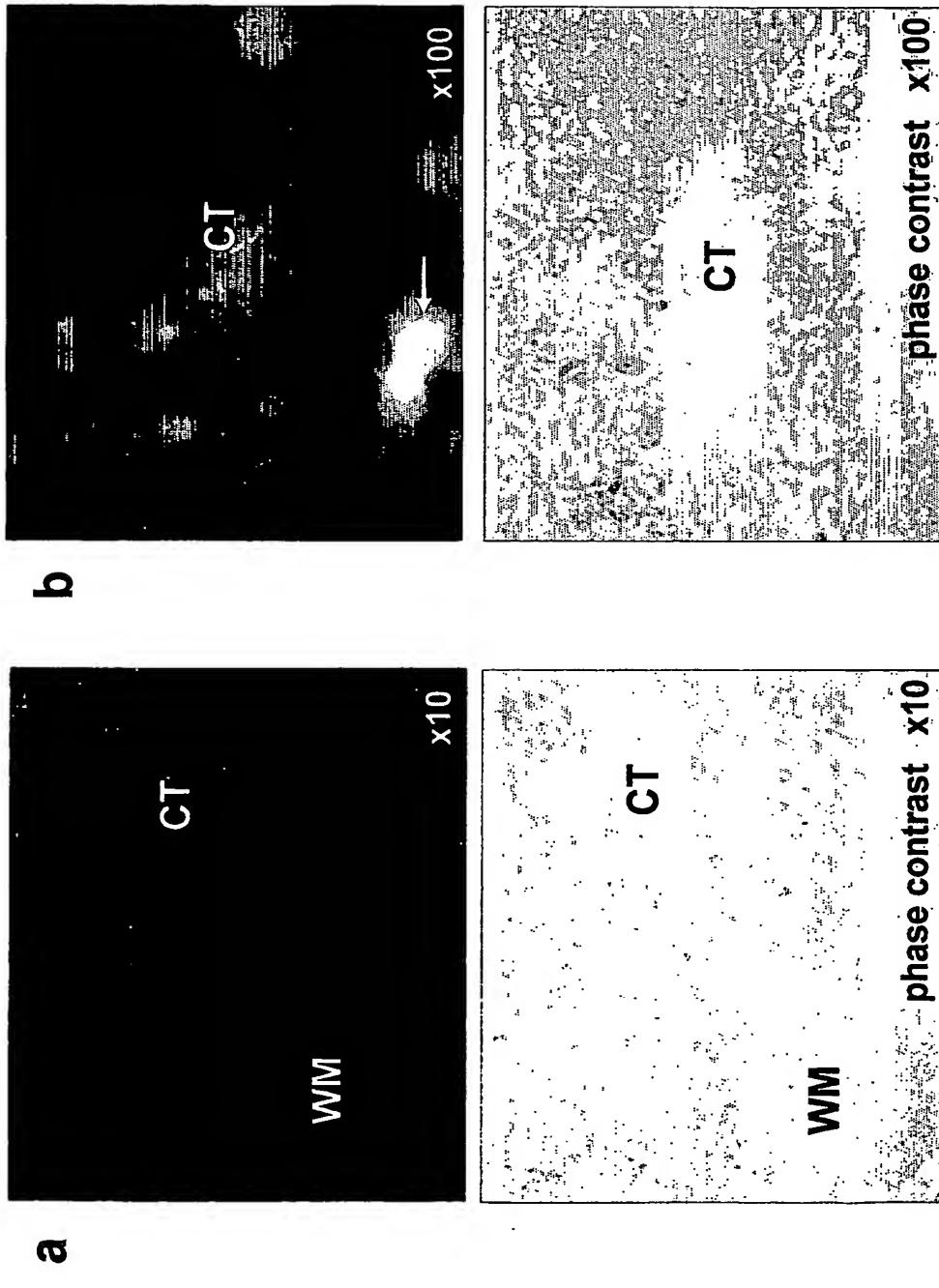
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8251 ACAATCAAGC CAAAAGAATA AAGGTTTCGC TTTTGTTTT GT

Fig. 9: SEQ ID NO. 3:
amino acid sequence of
human SCN2A protein

Length: 2005 aa

1 MAQSVLVPPG PDSFRFFTRE SLAAIEQRIA EEKAKRPKQE RKDEDDENG
 51 KPNSDLEAGK SLPFIYGDIP PEMVSVPLED LDPIYYINKKT FIVLNKGKAI
 101 SRFSATPALY ILTPFNPIRK LAIKILVHSL FNMLIMCTIL TNCVFMTMSN
 151 PPDWTKNVEY TFTGIYTFES LIKILARGFC LEDFTFLRDP WNWLDFTVIT
 201 FAYVTEFVDL GNVSALRTFR VLRAKLTISV IPGLKTIVGA LIQSVKKLSD
 251 VMILTVFCLS VFALIGLQLF MGNLRNKCLQ WPPDNSSFEI NITSFFNNSL
 301 DGNNGTTFNRT VSIFNWDEYI EDKSHFYFLE GQNDALLCGN SSDAGQCPEG
 351 YICVKAGRNP NYGYTSFDTF SWAFLSLFRL MTQDFWENLY QLTLRAAGKT
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 451 EQLKKQQEEA QAAAAAAASAE SRDFSGAGGI GVFSESSSVA SKLSSKSEKE
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 1901 EKQEEVSAI IIQRAYRRYL LKQKVKKVSS IYKKDKGKEC DGTPIKEDTL
 1951 IDKLNENSTP EKTDMTPSTT SPPSYDSVTK PEKEKFEKDK SEKEDKGKDI
 2001 RESKK

**Fig. 10: Images of the human cerebral cortex
labeled with anti SCN2A antibody and with DAPI**



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